# MILK RIVER WATERSHED NEWS

December 1999
VOLUME 2 NUMBER 4


## INSIDE



## COMING NEXT ISSUE:

**Bureau of Reclamation Regional Feasibility Study**
*By Lenny Duberstein*

# FORT BELKNAP WATER RIGHTS COMPACT NEGOTIATIONS MOVING FORWARD

*By Joan Specking*
*Montana Reserved Water Rights Compact Commission*

Negotiations to quantify the water rights of the Gros Ventre and Assiniboine Tribes of the Fort Belknap Reservation continue to move in a positive direction. Formal parties to the negotiations include the Tribes, the United States, and the State (represented by the Montana Reserved Water Rights Compact Commission). Negotiations are part of the state general stream adjudication, which is designed to settle all pre-1973 water rights and all federal and Indian reserved water rights in Montana.

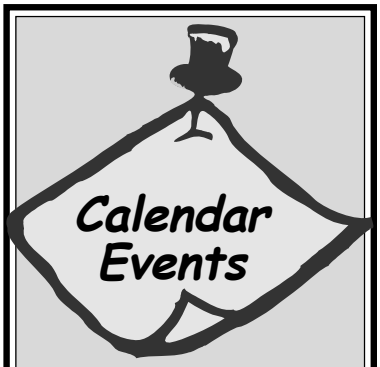
Negotiators have focused on an approach that would allow the Tribes to continue their current 125 cfs diversion from the natural flow of the Milk River plus develop a new 60,000 acre foot off-stream reservoir with 520 cfs pump lift capacity, without impacting off-Reservation water users in the basin. A great deal of technical work is required to help formulate practical solutions to achieve this goal. A joint technical team, comprised of hydrologists, agricultural engineers and other technical experts from the Compact Commission; the Bureau of Reclamation (USBR); Natural Resources Engineering Consultants (NREC), the Tribal consultants; and United States consultants; has focused its work on looking at various practical solutions.

*(Continued on page 2)*

*The Montana Water Resources Association (MWRA) congratulates the Milk River Joint Board of Control at the October MWRA meeting held in Chinook.*

*Left to Right: Bud Mavencamp (Manager for Malta Irrigation District), Mike Murphy (Executive Secretary for the MWRA), and John Overcast (President of Paradise Valley Irrigation District).*

SEASONS GREETINGS HAPPY NEW YEAR




The Joint Board of Control and Milk River International Alliance will sponsor meetings with the Reserved Water Rights Compact Commission to discuss the revised draft of the Fort Belknap Compact in February.

Stay Tuned.

John Dalton will explain his "On Farm Efficiency Report" on January 11 and 12 in the following locations:

Meeting in Chinook
January 11
1-3 p.m.
Chinook Motor Inn

Meeting in Malta
January 12
1-3 p.m.
Community Room in the First State Bank

Meeting in Glasgow
January 12
7-9 p.m.
Glasgow City-County Library

The Montana Office of the Bureau of Reclamation in Billings pays the cost for printing and mailing this newsletter.

***Negotiations***

*(Continued from page 1)*

The alternative appearing to hold the most promise for maintaining the current water supply for off-Reservation water users while satisfying the Tribal proposal, is to protect tributary water users by subordinating the tribal water right to them and to protect mainstem water users through improvements to the Milk River Project. (Tributaries contribute water to the natural flow of the Milk River.) Due to use of flood irrigation and lack of storage on upstream tributaries to the Milk River, the only practical way to protect tributary water users is to subordinate the priority of the Tribes' water right to these tributary water rights holders. This would protect the tributary users from a call on their water rights. If the negotiating parties determine that this is the appropriate solution, delivery of natural flow to the Tribes will require calculation of the natural flow on a daily basis and operation of the Milk River Project to deliver the natural flow. The joint technical team is working to develop a method to calculate the daily natural flows of the river.

This approach focuses the impact of new Tribal water development on the mainstem of the Milk River. To eliminate that impact, the Compact Commission is working with the irrigation districts and other water users to identify alternatives for improving water supply on the Milk River. It appears that most of the impact can be mitigated through improvements to existing storage and to the management of mainstem storage and water distribution. These suggested improvements include:
(1) addition of a pump lift to augment filling of Nelson Reservoir;
(2) construction of a secondary dam near the current inlet to Nelson Reservoir to increase storage and allow improved lake level regulation;
(3) enlargement of Fresno Reservoir;
(4) prospective storage sites requested for study by the Milk River International Alliance (MRIA) and the newly formed Joint Board of Control for the Irrigation Districts including one on 30-Mile Creek north of Harlem, and two on Beaver Creek;
(5) management of Bowdoin National Wildlife Refuge to augment storage as described below; and
(6) improvements in efficiencies both on-farm and conveyance and possible voluntary acreage or water usage reduction.

The USBR has begun a study to compare these proposals and past proposals to augment water supply in the Milk River. Results are expected in the fall of 2000. The study should provide negotiators and water users with sufficient information to narrow the list of alternatives.

In negotiations with the U.S. Fish and Wildlife Service for reserved water rights for the Bowdoin National Wildlife Refuge, the Compact Commission and the U.S. Fish and Wildlife Service have been considering an alternative that would reduce salinity at the Refuge and allow discharge of Refuge water to Beaver Creek. This option would bring water into Bowdoin from Beaver Creek, create a flow-through system and, as a secondary benefit, store some additional water for the Glasgow Irrigation District. Spring flood water, which normally escapes impoundment, would be held in Bowdoin and released back into Beaver Creek in late summer for downstream irrigators. Care would be taken to maintain releases of saline water at levels acceptable to downstream irrigators and the Montana Department of Environmental Quality. The Compact Commission has started working with the irrigators in lower Beaver Creek and the Milk River downstream from Bowdoin.

In addition to changes in storage, the negotiating parties believe that improvements in the management of the Milk River Basin may help facilitate more efficient delivery of water to both private irrigators and the Tribes. Negotiators are considering the formation of an umbrella organization called the Milk River Authority to coordinate management and enforcement among federal, state, and local agencies and irrigation districts in the Milk River Basin. It is proposed that the Milk River Authority, or MRA, would consist of nine members including: two from the Gros Ventre and Assiniboine Tribes; three from the Joint Board of Control

*(See **Negotiations** on page 4)*

# History of Rock Creek Canal Company

*By Marion Hellstern*

***GENERAL INFORMATION***

| | |
|---|---|
| ***Total Acres:*** | *8,560 acres* |
| ***Number of Farms:*** | *Approximately 15* |
| ***Water Price(s):*** | *$40 per Share* |
| ***Diversion:*** | *Approximately 10 miles northeast of Hinsdale* |
| ***Miles of canals and laterals:*** | *8 miles of main canal and 10 miles of laterals* |
| ***Board Members:*** | *Bill Black,* ***President*** *Elliot Strommen,* ***Vice President*** *Marion Hellstern,* ***Treasurer/Secretary*** *Howard Cornwell,* ***Director*** *Jim McColly,* ***Director*** |
| ***Number of employees:*** | ***Full Time:*** *0* ***Part Time:*** *Secretary and Bookkeeper as needed* |

Henry H. (H.H.) Nelson, having a difficult time raising sheep near Cascade, moved his operation north near Vandalia and staked out the first large irrigation project in the Milk River Basin. He filed the first claim to divert 250 cubic feet per second (cfs) from Rock Creek on August 14, 1901 as he planned to irrigate the Milk River flat, which is located between Rock Creek and Buggy Creek. The point of diversion was at the first riffle on the south bank of Rock Creek, below the old N-N ranch headquarters.

On November 1902, William M. Wooldridge, Fred Hellstern, Jerome Hutchins, Samuel E. Ruyle and Joseph H. Mayhew joined together and staked out and filed a second claim to divert an additional 750 cfs from Rock Creek. The diversion point was located on the left (south) bank of Rock Creek about sixty feet northwest of the windmill tower and two hundred twenty-five feet north of the Alfred Whitmore house (near the current dam site).

On December 8, 1902, Nelson joined the other water users and, together, they formed the Rock Creek Canal Company. They filed a claim for 60 shares, with each share equivalent to 160 acres for a total of 9600 acres. The notice of the Canal Company was filed with the Valley County Clerk and Recorder.

Archie Mahon, a Glasgow engineer who later worked for the State Engineer's Office in Helena, started surveying, planning, and engineering the project. The stockholders decided to either do the work themselves or hire someone to do it for them. Labor was paid at $1 per day for each man and horse team. The men generally stayed or boarded at the work camp for 25 cents per day where Mrs. Anna Miller did the camp cooking.

They first built a diversion dam that consisted of a crib of logs filled with rock and covered with planks. Willows were bunched together and held down with rocks below the dam to break the fall of water. All the original head gates and checks, including the main gates, were made of timber planks.

In early 1903, the stockholders began digging the primary canal. The majority of the work was done with two handled slips pulled by a team of horses. H.H. Nelson used a 24-horse elevating grader for his share of the work. Construction of the canal was completed in the fall of 1903. A large tractor was used for part of the plowing.

In the spring of 1904, Wooldridge, Hellstern, Hutchins, Ruyle, Mayhew and Nelson all agreed to sign their water rights over to the Rock Creek Canal Company.

My father, Fred Hellstern, stopped at the 1904 World's Fair in St. Louis on his way to visit his family in Arkansas. He entered his potatoes and rutabagas at the fair, which were grown with Rock Creek water, and won a bronze medal.

The winter of 1906-07 was terrible. Snow covered the ground up to three feet deep and the temperature remained below zero for days. Many stockmen lost their cattle. Ranchers that were able to move their cattle to the irrigated hay lands were able to avoid complete disaster.

Around the late 1920s, water started washing around the ends of the diversion dam. Dirt was added as fill, but it continued to wash. The following spring, pilings with planking were installed to break the force of the ice. This repair was successful and in fact, these pilings are still in good shape today.

In 1927, the Canal Company was re-incorporated when its first charter expired. The value of each share was than set at $800 with an annual assessments limited to 5 percent of the share value, or $ 40 per year. Unanimous agreement was required to levy more than the 5 percent per share in any given year.

In August of 1933, the Rock Creek Canal Company filed a lawsuit in district court to clarify or adjudicate its water rights. A decree on the Rock Creek mainstem was handed down on September 16, 1933. Palmer Gaasch was given the first right to 1 cfs and seventh right to 140 cfs. Rock Creek Canal Company was given second right to 300 cfs and third through sixth rights totalling 26 cfs.

In August of 1985, the Montana Water Court, in its preliminary decree on Rock Creek, upheld the district court decree of 1933. Rock Creek Canal Company now has a current water right to 18,680 miner's inches or 467 cfs with a November 18, 1902 priority date.

The original log crib dam was later replaced with planks and

***(Continued on page 4)***

***Rock Creek***

*(Continued from page 3)*

concrete. It is now a concrete overflow diversion dam that spans Rock Creek. All the checks in the main canal have been replaced with concrete and all the gates to the laterals have been replaced with steel culverts that have steel shut-off gates.

There are no storage facilities on the project. The U.S. Bureau of Reclamation had identified two reservoir sites. The best one is located in Rock Creek Canyon approximately 10 miles north of the diversion dam. Although this reservoir site was described as excellent, the stockholders felt the cost to construct the reservoir was too high and therefore, not economically feasible.

***Marion Hellstern, long-time secretary for Rock Creek Canal Company, stands atop the Rock Creek Diversion Dam.***

Today, the Rock Creek Canal Company has 53.5 active shares for a total of 8,560 acres. The assessment is still maintained at $40 per share which hasn't changed since it was set in 1927. Hay is the primary crop. About a third of the land is a combination of alfalfa, native grass, and small grain. Those that have succeeded on the project have used the land as a feed base for wintering livestock. ■

***Negotiations***

*(Continued from page 2)*

of the Milk River irrigation districts; one from the Montana Department of Natural Resources and Conservation; one from the USBR; one from the Bureau of Indian Affairs; one selected by all the others; and an advisory member from the U.S. Geological Survey.

The basic duties being proposed for the MRA are the coordination of storage and release of water in the basin, as well as the enforcement of the delivery and distribution of water at diversion points on the mainstem of the Milk River as bound by State, Tribal, and federal law and the proposed compact. The MRA as proposed would not have the authority to determine water rights. The irrigation districts, BIA, and the Tribes would continue to manage water distribution within canal systems once the water leaves the mainstem of the Milk River.

Several other management improvements under consideration by negotiators include the development of a common computer database that can be used by the irrigation districts, the USBR, the Tribes, and the Montana Department of Natural Resources and Conservation to coordinate and manage water delivery in the basin. The Commission staff has been working with the irrigation districts and the Tribes to develop the database and train staff to maintain it. The database could provide opportunities for improved management far beyond the scope of negotiations.

A compact represents a final settlement of the water rights of the Tribes. It is essential that the solutions contained in the compact are ones that both the Tribes and their neighbors can live with. None of the concepts discussed in this article are agreed on as being final, and they are all still being studied by the negotiators. The negotiating parties need input from local water users and irrigation districts regarding all aspects of the proposed compact. The Compact Commission holds periodic public meetings in the area, maintains frequent contact with the irrigation districts, and publishes notices of negotiations which are always open to the public.

The negotiators anticipate releasing a second draft compact to the public in January 2000, reflecting the current status of proposals. The Commission staff will be available to meet with irrigation districts, the Joint Board, and the MRIA and other interested parties on request to explain the draft.

It is important that interested citizens in the Milk River basin, including its tributaries upstream from the Fort Belknap Reservation, get involved and voice their concerns and ideas at an early stage in the negotiations. The compact needs citizen support to pass the Montana Legislature and the goal is to settle these negotiations by the 2001 Legislature. Settlements of these water rights will benefit everyone in the basin by removing the uncertainty of what the Tribal water right is and how it might impact the basin in the future.

For questions or comments regarding the negotiations and the draft compact, please call Barbara Cosens or Bill Greiman at the Montana Reserved Water Rights Compact Commission in Helena, (406) 444-6841. ■

# Water Conservation in the Milk River

*By Brent Esplin, USBR*

What is water conservation? To some, it has a negative meaning as it implies that conserved water will be given to someone else for another purpose. A better term to use is efficient water management. This is the practice of managing a limited water supply to meet all beneficial uses. Beneficial uses are defined under Montana Law and include irrigation, agriculture, domestic, fish and wildlife, industrial, recreation, mining and other uses.

Why did the U.S. Bureau of Reclamation (USBR) create a new water conservation program? Actually, the USBR had no choice. The Water Conservation Field Service Program (Conservation Program) was created in response to the settlement of a lawsuit filed by environmental groups. These groups charged the USBR with not taking an active role in implementing the water conservation provisions of the Reclamation Reform Act of 1982 (RRA). The Act specifically states, "Each [irrigation] district that has entered into a repayment contract or water service contract [with USBR] . . . shall develop a water conservation plan which shall contain definite goals, appropriate water conservation measures, and a time schedule for meeting the water conservation objectives." Therefore, on December 10, 1996, USBR Commissioner Martinez signed a memorandum implementing the new Conservation Program.

The goal of the Conservation Program is to help affected irrigation districts develop and implement water conservation plans. To implement this goal, the USBR has made technical and financial assistance available to the irrigation districts. Technical assistance can be used to evaluate different options for implementing cost-effective water conservation measures such as making physical changes in the irrigation system or improving the administration and management of the system, or both. Money is also available through grants to assist with implementing the changes identified in the water conservation plans.

The USBR has taken a proactive approach in promoting the development of water conservation plans in the Milk River Basin. Most of the work is in cooperation with the eight Milk River irrigation districts, Montana State University Extension Service, and local and state agencies including the Department of Natural Resources and Conservation (DNRC). Ongoing activities under the Conservation Program include the following.

USBR and DNRC are currently working with the Glasgow, Malta, and Paradise Valley Irrigation Districts to evaluate the efficiency of their existing operations. These evaluations will determine what type of measures, whether physical or managerial, are most effective for improving overall system efficiencies. In addition, the evaluation will look at where additional data and measuring devices are needed for improving water accounting and delivery.

Besides technical assistance, financial assistance is available for implementing approved water conservation plans. For instance, the Malta Irrigation District has received a cost-share grant to implement a water measurement demonstration project. The goal is to establish a remote monitoring system before the beginning of the next irrigation season that allows the district to determine flows and discharges at various points in its conveyance system. This information should help the district optimize diversions and use of water in the system.

The Milk River AgriMet Demonstration Program began in the spring of 1998 with the installation of three automated weather stations located near Harlem, Malta, and Glasgow. The stations are used to calculate potential evapotranspiration (ET) rates for various crops produced near these gages. This information should help producers do a better job managing the scheduling of irrigation water. Benefits from the program could be many—from increasing yields, to improving water quality and the development of a better understanding of the relationship between soil and crop water. For more information, contact the Phillips Conservation District at (406) 654-1334 or visit the USBR web site at www.gp.usbr.gov.

USBR also began working collaboratively with Montana State University Extension Service to conduct water use efficiency demonstrations and education seminars in 1998. A series of scoping meetings were first conducted to assess the basin needs. From this assessment, a series of newsletter and newspaper articles were developed. In addition to the educational articles, demonstration projects and educational seminars will be developed as the need arises to address specific concerns of local producers.

To address the many water management challenges in the Milk River Basin, local participation and guidance is paramount. The USBR, through its Conservation Program, will continue to work with the irrigation districts, the Milk River Joint Board of Control, the Milk River International Alliance, and others to evaluate, plan, and implement cost-effective water management measures. For more information contact Brent Esplin at 247-7489 or Mike Dailey, DNRC at 228-2561.

## Web Sites to Bookmark

***United States Bureau of Reclamation Great Plains Region***
***www.gp.usbr.gov***
***Natural Resource Information System***
***http://nris.mt.gov***
***United States Geological Survey***
***http://montana.usgs.gov***
***Montana Online***
***www.mt.gov***
***Montana Department of Natural Resources and Conservation Home Page***
***www.dnrc.state.mt.us***
***The Weather Channel Homepage***
***www.weather.com***

***Milk River Watershed News* is prepared and published by DNRC—Water Management Bureau, Helena (444-6637)**
***Editor: Rich Moy***
***Graphic Designer: Shannon Voss***


# High Winds Damage Lake Sherburne Dam

*By Steve Davies, USBR*

Lake Sherburne Dam in Glacier County received minor damage to the upstream face during a period of high winds on November 12 of this year. Large waves in the reservoir, created by force winds estimated at 90 miles per hour, damaged a portion of the protective rock cover on the upstream face of the dam. The damage was only superficial, with the largest damaged area being about 45 feet wide and 25 feet long, and two to three feet deep into the protective layer of the dam ( See right figure). Two other smaller damaged areas were about 4 feet wide by 6 feet long, and only about 2 feet deep.

There was no significant structural damage to the 78-year old dam. Bureau of Reclamation staff, however, worked quickly to repair the damage before winter weather set in. Heavy rains occurring upstream of the dam on November 12 and 13 raised the reservoir water elevation too high to begin repairs immediately. After lowering the reservoir about eight feet to allow equipment access to the area, the crew completed the majority of the necessary repairs on the 3rd of December. The repairs consisted of cleaning out the damaged area and placing new protective rock. The rockfill will be grouted next spring when weather permits.

***Bureau of Reclamation crew using an excavator to repair the damage to the front face of Lake Sherburne Dam.***

Lake Sherburne Dam, originally constructed from 1914 to 1921, is an earthfill dam with a maximum height of about 108 feet. The dam has undergone spillway and outlet works modification in 1960, and was raised higher in 1984. Storage in the reservoir at the time of the November incident was about 38,000 acre-feet, which is 56 percent of the full capacity of about 68,000 acre-feet. The dam is owned and operated by the Bureau of Reclamation and it provides an important source of water to irrigators in the Milk River Basin.


1,350 copies of this document were published at a total cost of $870.38 which includes $628.28 for printing and $242.11 for distribution.



MILK RIVER WATERSHED NEWS

**DNRC—WATER RESOURCES DIVISION**
**P.O. BOX 201601**
**HELENA, MT 59620-1601**

**BULK RATE**
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